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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,853	08/04/2003	William C. Paluch	PAT013US	6606
32656	7590	12/22/2005	EXAMINER	
W-H ENERGY SERVICES, INC. 10370 RICHMOND AVENUE SUITE 990 HOUSTON, TX 77042			GAY, JENNIFER HAWKINS	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/633,853	PALUCH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jennifer H. Gay	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because Figures 3A and 5A include section lines that are labeled with alphanumerically instead of with Arabic or Roman numerals (see 37 CFR 1.84(h)(3)). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The abstract of the disclosure is objected to because the abstract now contains purported merits, “The sampling tool may be advantageously utilized to”. The abstract is also greater than 150 words. Correction is required. See MPEP § 608.01(b).
3. The abstract of the disclosure is further objected to because it does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13, 18-31, 34-37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ringgenberg et al. (US 5,799,733) in view of Michaels et al. (US 5,303,775).

*Regarding claims 1, 22, 35:* Ringgenberg et al. discloses a wellbore tool. The tool includes the following features:

- A drill string (18:44-46) having a drill bit disposed on the end thereof.
- A formation evaluation tool **280** disposed on the drill string.
- A formation fluid sampling tool **2004** disposed on the drill string

where the sampling tool includes the following features:

- At least one sample tank **234** mounted in a tool collar.
- The tool collar includes a through bore and is operatively couple with a drill string (18:44-46) such that the at least one sample tank receives a formation fluid sample.

- A packer element **204** for sealing the wall of the wellbore around the tool where the packer is movable between a sealed and unsealed position.
- A sample inlet port **238** connected to the sample chamber by an inlet passageway **232**

Ringgenberg et al. discloses all of the limitations of the above claims except for the at least one sample tank including a internal fluid separator that splits the tank into a sample chamber and a pressure balancing chamber.

Michaels et al. discloses a tool similar to that of Ringgenberg et al. Michaels et al. further teaches a sample tank that includes an internal fluid separator **128** for splitting the tank into a sample chamber **138** and a pressure balancing chamber **140** where the pressure balancing chamber is in fluid communication with the drilling fluid exterior to the tool collar while the sampling chamber is in fluid communication with the formation fluid (9:27-51).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the at least one sample tank of Ringgenberg et al. to include the internal fluid separator taught by Michaels et al. in order to have maintained the fluid sample above the bubble point thus preventing fluid separation prior to being tested.

*Regarding claims 2, 28:* The pressure balancing chamber is in fluid communication with drilling fluid exterior to the tool collar.

*Regarding claims 3, 29:* The pressure balancing chamber is also in fluid communication with drilling fluid in the through bore of the tool.

*Regarding claim 4:* The drilling fluid exterior to the pressure balancing chamber would inherently be about the same as the hydrostatic pressure in the wellbore unless drilled in underbalanced or overbalanced conditions.

*Regarding claim 5:* Though neither Ringgenberg et al. nor Michaels et al. disclose that the drilling fluid has a pressure that exceeds the hydrostatic pressure of the wellbore, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have drilled the wellbore in overbalanced conditions in order to

have prevented formation fluid from entering the wellbore prematurely as well as to have stabilized the walls of the wellbore.

*Regarding claims 6, 29:* Ringgenberg et al. discloses the use of a plurality of sample tanks.

*Regarding claims 7-9:* The sample tanks are disposed co-axially with the tool collar within the through bore.

*Regarding claims 10, 13, 30, 31, 39:* The tool further includes a pressure control assembly **212** and **236** to control the flow of drilling fluid between the through bore and the wellbore.

*Regarding claim 11:* The pressure control assembly includes at least one drill bit jet; the examiner notes that the assembly includes a drill bit which would inherently include a drill bit nozzle or jet.

*Regarding claim 12:* The pressure control assembly includes at least one discharge port, i.e. a nozzle in the drill bit **212**, that is connected to the through bore by a corresponding outlet passageway that is controlled by a valve **236**.

*Regarding claim 18:* The internal fluid separator of Michaels et al. includes a seal **132, 134** deployed between the sample chamber and the pressure balancing chamber.

*Regarding claim 19:* The tool includes an electronic controller (23:11-15).

*Regarding claims 20, 37:* The tool includes the formation evaluation tool or a measurement while drilling tool **280**.

*Regarding claims 21, 34:* The tool includes a pump **240**.

*Regarding claim 23:* The packer element includes a first **206** and second **208** packer element with the sample inlet disposed therebetween.

*Regarding claims 24, 25:* The tool includes a fluid identification module that includes at least one sensor **235** for sensing a physical fluid property such as resistivity (19:35-37).

*Regarding claim 26:* The tool includes a first fluid passageway connecting the fluid identification module to the sample chamber (Figures 3A and 3B) and a second fluid passage **256** connecting the fluid identification module to an output port for expelling fluid from the tool.

*Regarding claim 36:* Ringgenberg et al. further discloses the method for using the above tool that involves providing the tool, coupling the tool to the drill string, positioning the tool in the wellbore at a location of interest, pumping formation fluid into the sample chamber.

7. Claims 14-17, 32, 33, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ringgenberg et al. in view of Michaels et al. as applied to claims 1, 22, and 36 above, and further in view of Brown et al. (US 5,901,788).

*Regarding claims 14, 32:* Ringgenberg et al. and Michaels et al. disclose all of the limitations of the above claims except for the at least one sample tank being insulated.

Brown et al. discloses a sampling tool similar to that of Ringgenberg et al. Brown et al. further teaches insulating the sample tanks (4:15-20).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the at least one sample tank of Ringgenberg et al. in view of Michaels et al. so that the at least one tank was insulated as taught by Brown et al. in order to have minimized heat loss from the sample thus maintaining the sample in a single phase (2:32-55).

*Regarding claim 15:* Brown et al. discloses all of the limitations of the above claims except for the insulation having an r-value greater than or equal to about 12. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the sample tanks of Ringgenberg et al. in view of Michaels et al. and Brown et al. with an insulation having an r-value greater than or equal to about 12, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

*Regarding claim 16, 33, 38:* Ringgenberg et al. and Michaels et al. disclose all of the limitations of the above claims except for the tool including a heating module for heating the at least one sample tank.

Brown et al. further teaches a heating module 36 for heating the sample chamber.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the tool of Ringgenberg et al. in view of Michaels et al. to include a heating module as taught by Brown et al. in order to have minimized heat loss from the sample thus maintaining the sample in a single phase (2:32-55, 60-65).

*Regarding claim 17:* The heating module of Brown et al. is an electrical resistance heater.

### ***Response to Arguments***

8. In view of applicant's amendment the objections to the drawings, except that remaining above, the specification, and claims have been withdrawn. The objection to the abstract given above has resulted from the amendments made thereto.

9. Applicant has argued that the section line labels for Figures 3A and 5A meet the standards of 37 CFR 1.84(h)(3) because the labels include Arabic numerals. It is noted that the standard does not indicate that the labels need only include Arabic or Roman numerals but that the labels **should be** Arabic or Roman numerals without the inclusion of letters.

10. In view of the amendments made to the claims, the double patenting rejection of the claims has been withdrawn.

11. Applicant's arguments filed November 10 2005 have been fully considered but they are not persuasive.

In response to applicant's argument in paragraph 10 of the response, it is noted that the statement "It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have" combine Ringgenberg et al. and Michaels et al. is merely a statement of legal principle. The actual motivation to combine the references is found in the remainder of the sentence, "in order to have maintained the fluid sample above the bubble point thus preventing fluid separation prior to being tested." An entire reading of this complete sentence shows that a motivation or suggestion to combine the references was provided.



In response to applicant's argument in paragraph 12 that the combination of Ringgenberg et al. and Michaels et al. would not have resulted in the teaching of "the sample chamber being in fluid communication with formation fluid concurrently with the pressure balancing chamber being in fluid communication with drilling fluid exterior to the pressure balancing chamber", it is noted that this feature is taught by Michaels et al. in column 9, lines 27-51.

In response to applicant's argument in paragraph 13 that Ringgenberg et al. does not teach the above feature thus the combination would not result in the teaching of the limitation, it is noted that, as stated above, the feature is taught by Michaels et al. Further, the examiner has not indicated that Ringgenberg et al. teaches a sample chamber and a pressure balancing chamber thus it could not teach the fluid communication of each. Michaels et al. was combine with Ringgenberg et al. to provide the teaching of the sample chamber and pressure balancing chamber and thus teaches the fluid communication of each.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

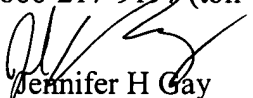
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jennifer H. Gay  
Primary Examiner  
Art Unit 3672

JHG   
December 15, 2005